



## Department of Energy

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Mr. James A. Saric, Remedial Project Manager  
U.S. Environmental Protection Agency  
Region V, SRF-5J  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

DOE-0947-99

Mr. Tom Schneider, Project Manager  
Ohio Environmental Protection Agency  
401 East 5<sup>th</sup> Street  
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

**TRANSMITTAL OF RESPONSES TO OHIO ENVIRONMENTAL PROTECTION AGENCY  
COMMENTS ON THE CONTROLLING OF MAMMALIAN BROWSING AND COMPETING  
VEGETATION, OPERABLE UNIT 4 ECOLOGICAL RESEARCH GRANT SUPPLEMENTAL  
PROJECT**

Enclosed for your review are responses to the Ohio Environmental Protection Agency's (OEPA) comments on the Implications of Reforestation: Controlling Mammalian Browsing and Competing Vegetation, Operable Unit 4 (OU4) Ecological Research Grant Supplemental Project.

The revised report was sent with the Supplemental Environmental Projects (SEP) Annual Reports under a separate cover.

If you have any questions or comments regarding this document, please contact Kathi Nickel at (513) 648-3166 or Robert Janke at (513) 648-3124.

Sincerely,

Johnny W. Reising  
Fernald Remedial Action  
Project Manager

FEMP:Nickel

Enclosures

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Mr. James A. Saric  
Mr. Tom Schneider

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cc w/enclosures:

G. Jablonowski, USEPA-V, SRF-5J  
T. Schneider, OEPA-Dayton (three copies of enclosures)  
F. Bell, ATSDR  
M. Schupe, HSI GeoTrans  
R. Vandegrift, ODH  
F. Barker, Tetra Tech  
AR Coordinator, FDF/78

cc w/o enclosures:

N. Hallein, EM-42/CLOV  
A. Tanner, OH/FEMP  
D. Carr, FDF/52-2  
J. Chiou, FDF/52-0  
T. Hagen, FDF/65-2  
J. Harmon, FDF/90  
R. Heck, FDF/2  
S. Hinnefeld, FDF/31  
T. Walsh, FDF/65-2  
E. Woods, FDF/65-2  
ECDC, FDF/52-7

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**RESPONSES TO OHIO EPA COMMENTS  
ON THE IMPLICATIONS OF REFORESTATION:  
CONTROLLING MAMMALIAN BROWSING AND COMPETING VEGETATION,  
OPERABLE UNIT 4 SUPPLEMENTAL PROJECT**

**FERNALD ENVIRONMENTAL MANAGEMENT PROJECT**

Commenting Organization: Ohio EPA  
Section #: Pg #: Line #: Commentor: OFFO  
Code: C

Original Comment #: 1

Comment: This review appeared to be rambling and did not clearly point to any direction that the literature may have favored. Additionally, it lacked in the basic assessment of facts or findings from the literature reviewed. Page 4 mentions that chemical repellents are either ineffective or reduce damage slightly, but there is no reference attached to this statement. There is no conclusion that "...X is best because...and avoid Y because..." These kinds of assessments would have resulted in the document being useful in restoration work at Fernald.

Response: Comment acknowledged.

Action: Revise and reformat paper to include recommendations.

Commenting Organization: Ohio EPA  
Section #: Pg #: 1 & 2 Line #: Commentor: DSW  
Code: E

Original Comment #: 2

Comment: "effect" is used when "affect" should be used.

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Ohio EPA  
Section #: Pg #: 2 Line #: Commentor: DSW  
Code: C

Original Comment #: 3

Comment: In the discussion of factors affecting browsing, there is no mention of migratory routes. Is this an omission or are they not important in browsing? Additional review of literature in this area is warranted.

Response: Although migratory routes are very important in a natural setting, edge effects and human activity are probably more important at Fernald. Much of the site has fence in place, and fencing is frequently moved and installed on a temporary basis as the remediation work proceeds. The constant earth moving and construction activities will greatly influence the deer movement. References concerning edge effects are discussed under the "Browsing Intensity, Timing and Preferences" section.

Action: None required.

Commenting Organization: Ohio EPA  
Section #: Pg #: 2  
Original Comment #: 4

Commentor: DSW  
Code: C

Comment: It is stated that deer browsing woody twigs may be an impediment to reforestation projects but there is no significant detail as to how. More detail on causes/solutions is needed.

Response: Comment acknowledged.

Action: Provide additional detail regarding the effects of browsing on reforestation efforts under the heading "Browsing Intensity, Timing and Preferences."

Commenting Organization: Ohio EPA  
Section #: Pg #: 3  
Original Comment #: 5

Commentor: DSW  
Code: E

Comment: The sentence after "(Kittredge et al 1992)." appears to be the beginning of the next paragraph although it is the following sentence that is used to begin the paragraph.

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Ohio EPA  
Section #: Pg #: 4  
Original Comment #: 6

Commentor: DSW  
Code: C

Comment: Please define "stems per acre"?

Response: Agree.

Action: Add the definition of "stems per acre" within the "Fencing, Enclosures, and Repellents" section.

Commenting Organization: Ohio EPA  
Section #: Pg #: 4  
Original Comment #: 7

Commentor: DSW  
Code: C

Comment: What is a traditional agricultural fence that is 8' high? Some illustrations, photos or diagrams would be helpful with some of this information. Most agricultural fence is significantly shorter than 8'.

Response: Comment acknowledged.

Action: Add discussion on different types of fencing and include illustrations within the "Fencing, Enclosures, and Repellents" section.

Commenting Organization: Ohio EPA  
Section #: Pg #: 4  
Original Comment #: 8

Commentor: DSW  
Code: C

Comment: The statement on the bottom of this page that gives some data (e.g. browsing <40%, no reaction to non-predator urines) is the kind of information I would expect to see but appears to be lacking in this review.

Response: Comment acknowledged.

Action: None required.

Commenting Organization: Ohio EPA

Commentor: DSW

Section #: Pg #: 5

Line #:

Code: C

Original Comment #: 9

Comment: The second paragraph on this page states that "each technique has its own advantages and disadvantages.." and never really discusses any of these in any detail. Ohio EPA would expect this to be the kind of information most important in this review. Without it the review seems to be worth very little. A table included in the report summarizing pros and cons would be most useful to future planning efforts.

Response: Comment acknowledged.

Action: Revise and reformat paper to include a Recommendations section.

Commenting Organization: Ohio EPA

Commentor: DSW

Section #: Pg #: 5

Line #:

Code: E

Original Comment #: 10

Comment: "synthesize" should read "synthesis."

Response: Agree.

Action: Revise text accordingly.

Commenting Organization: Ohio EPA

Commentor: DSW

Section #: Pg #: 6

Line #:

Code: C

Original Comment #: 11

Comment: The top of this page starts to talk about mulches but without references or comparisons. Nowhere are the conditions of mice and other herbivorous mammals that may use mulches for cover discussed.

Response: Comment acknowledged.

Action: Add a discussion of mulch and a table of mulch comparisons under the heading "Interspecific Competition." Add recommendations regarding mulch in the Recommendations section.

Commenting Organization: Ohio EPA

Commentor: DSW

Section #: Pg #: 6 & 7

Line #:

Code: C

Original Comment #: 12

Comment: "Excessive herbaceous removal" is mentioned without mentioning what the limits of "acceptable" removal might be. Discussion of ranges, damages, etc., seems appropriate here.

Response: No research was found with experimentally manipulated levels of herbaceous removal as a method for controlling competition from "weeds." Although the easiest type of tree planting is done in areas which have been completely cleared of vegetation, this "excessive herbaceous

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removal" would lead to topsoil erosion and a very unnatural microhabitat. Many of the beneficial soil microbes and organisms would die if all of the organic matter were stripped from an area.

Action: None required.

Commenting Organization: Ohio EPA

Commentor: DSW

Section #:

Pg #:

Line #:

Code: C

Original Comment #: 13

Comment: The review seems to be missing key articles. For example, much work was done by Jonas Bergquist but there is no reference to his work.

Response: The review focused on information relevant to restoration at Fernald. Much research was not included because it was specific to conifers.

Action: Add a "Scope" or "Review" section at the beginning of the paper.

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